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Anmeldenummer / Filing No / N° de la demande : 79 301 958.9

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Bezeichnung der Erfindung: Portable toilet with improved flush apparatus

Title of invention:

Titre de l'invention :

Klassifikation / Classification / Classement : E03D 5/01, E03D 5/10

### ENTSCHEIDUNG / DECISION

vom / of / du 4 February 1988

Anmelder / Applicant / Demandeur : THETFORD CORPORATION  
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Titulaire du brevet :

Einsprechender / Opponent / Opposant : FIAMMA S.p.A., Viale Europa 69,  
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Stichwort / Headword / Référence :

EPÜ/EPC/CBE Article 123(2) and (3), Articles 52 and 56

Kennwort / Keyword / Mot clé : - Allowable amendments (yes)  
- Inventive step (yes)

Leitsatz / Headnote / Sommaire

Europäisches  
Patentamt

Beschwerdekammern

European Patent  
Office

Boards of Appeal

Office européen  
des brevets

Chambres de recours



Case Number : T 16/86

**DECISION**  
of the Technical Board of Appeal 3.2.2  
of 4 February 1988

**Appellant :**  
(Opponent)

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**Decision under appeal :**

Interlocutory decision of the Opposition Division of  
the European Patent Office dated 04 November 1985  
concerning maintenance of European patent  
No. 0 009 405 in amended form.

**Composition of the Board :**

**Chairman :** C. Maus

**Members :** R. Gryc

P. Ford

## Summary of Facts and Submissions

- I. European patent No. 0 009 405 comprising six claims was granted to the Respondent on 09.02.83 on the basis of European patent application No. 79 301 958.9 filed on 20.09.79 and claiming the priority of a previous US application of 26.09.78.

Claim 1 as granted reads as follows:

1. A portable toilet that includes a portable upper section (12) providing a bowl (24) that has an opening (2) at the bottom and providing a water tank (26) for storage of water for flushing said bowl, said water tank having an aperture (76) in a top wall portion (15) thereof for mounting a manually actuatable pump apparatus (34) for pumping water from said tank to said bowl for flushing purposes, the pump apparatus (34) comprising an electrically operated submersible pump (40) having a water inlet located adjacent to the bottom (20) of the tank (25) and an electrical switch (39) for energizing said pump (40) when the switch (39) is closed and a housing (42) enclosing the upper portions of the pump (40) in sealed relationship and the housing (42) being sealed (at 78) to the edge of the aperture (76) in the top wall portion (16), characterized in that a seal (68) is provided between the lower end of the housing (42) and the pump (40) to prevent escape of water from the tank (26) into the housing (42), that the switch for energising the pump is rigidly mounted on said pump (40) at an elevated position above said top wall portion (16), that said switch (39) is located externally of said tank (26) for manual actuation and is normally biased open and is responsive to pressure exerted thereon to move to a closed position, that said switch (39) is so arranged that flushing of the bowl (24) can occur only while the switch (39) is maintained closed by exerted

pressure, that the housing (42) encloses the switch (39) as well as the upper portion of the pump (40) and that the housing (42) is flexible for actuation of the switch (39) therein.

II. The Appellant filed an opposition against this patent and requested its revocation on the grounds of lack of inventive step in view of:

US-A-3 949 430

US-A-3 067 433

DE-B-1 609 258

An additional document (US-A-3 570 018), which had been considered before grant, was also cited at the oral proceedings held on 29.01.85 in the course of which the Patentee requested amendment to Claim 1 and to the description in order to clarify the situation with regard to DE-B-1 609 258 considered before grant as the most relevant document.

III. At the conclusion of the oral proceedings the Opposition Division informed the parties that it intended to maintain the patent with the following amendments:

- (a) The word "portable" be deleted from the title, the opening sentence and lines 27 and 28 of column 1 of the description and from line 1 of the preamble of Claim 1 and the dependent claims.
- (b) The phrase "the toilet and the upper section are portable, that" be inserted after "characterized in that" in column 1, line 55 of the description and in Claim 1.

IV. In an interlocutory decision issued on 04.11.85 the Opposition Division decided to maintain the patent in the amended form indicated above and gave the reasons for the decision.

V. On 18.12.85 the Opponent lodged an appeal against this decision and paid the relevant fee simultaneously.

He requested that the decision should be set aside and that the patent No. 9405 should be revoked in its entirety.

The Statement of Grounds filed on 04.03.86 may be summarised as follows:

- (a) The amendments offend against Article 123(2) because the application as originally filed concerned portable toilets only and not toilets of general type including non-portable toilets.
- (b) The change in position of the word portable in Claim 1 could have changed the effectiveness of the search if it would have been done before.
- (c) The amendments offend against Article 123(3) because the extent of the protection is determined by the content of the claims, i.e. the teaching to the man skilled in the art. A change in the position of the feature will change this teaching and thus the protection accordingly.

VI. In his submission of 12.06.86, the Respondent (Patentee) did not deny that the application has at all times been concerned with the provision of improved portable toilets. He contended that the protection is not changed by a particular limitation being in the preamble or the characterising part of the claim and that the search was not restricted to portable toilets only.

The Respondent requested that the Appeal be dismissed and the impugned decision be upheld.

#### Reasons for the Decision

1. The Appeal complies with Articles 106 to 108 and with Rule 1, paragraph 1 and Rule 64 EPC; it is therefore admissible.
2. It should first be pointed out that the purpose of the claims is to define the matter for which protection is sought (Article 84 EPC), that the extent of protection conferred by the patent is determined by the terms of the claims (Article 69) and that it is the subject-matter of the claim as a whole which embodies the invention (see Decision T 13/84, OJ EPO 8/86, pages 253 and 259 - paragraph 15).

Therefore, insofar as a change in the position of a feature inside a claim does not alter the meaning thereof, the extent of protection conferred remains unchanged and such an amendment does not contravene either Article 123(2) or Article 123(3) EPC (see Decision T 271/84, OJ EPO 9/87, pages 408 and 409 - paragraph 2).

In the present case, the use of the word "portable" either as an attributive adjective as in Claim 1 as granted or as

a predicative adjective as in Claim 1 as amended does not change the meaning of the teaching of the claim.

Consequently, the subject-matter of Claim 1 is still a portable toilet and the amendments do not offend against Article 123(2) and (3) EPC.

3. It follows from this that the objections of the Appellant concerning the search also fail.

Moreover, the effectiveness of the search does not depend on the position of the features inside the claims because, according to the Guidelines for Examination Part B, Chapter III, 3.2, the search should not be restricted to the literal wording of the claims and the Examiner has to direct a special emphasis to the inventive concept underlying the invention. Consequently, if Claim 1 in its present wording would have been subject of the search, the search should have included the technical field of portable toilets in any case.

In addition, opposition proceedings give the public the opportunity to fill gaps of the search if any and, as Opponent, the Appellant seized this opportunity.

4. It follows from the foregoing discussion that the Board cannot agree with any of the arguments of the Statements of Grounds of the Appellant of 04.03.86 as summarised above under point V of the Summary of facts and submissions and that the amendments of the claims requested by the Applicant at the hearing of 29.01.85 and accepted by the Opposition Division are allowable.

Moreover, the Appellant having contended that reference to the toilet and the upper section as "portable" renders Claim 1 unclear, the Board points out that by using the

description to interpret the meaning of the claim, it appears clearly that the toilet comprises two sections, a lower holding tank section and an upper seat section removably supported thereon (see column 2, lines 58-61 of the patent), and that the seat section alone is portable (see column 3, lines 15-17) as well as the unit constituted by the assembly of the two superposed sections.

5. Therefore, the Board has examined the patentability of the invention on the basis of the present Claim 1.
6. Having examined the documents cited in the search report, in the original description and during opposition proceedings, the Board has come to the conclusion that the known toilets disclosed in these documents are divided in two categories: those portable having two vertically stacked sections i.e. an upper seat section incorporating a flush water tank and a separate detachable lower holding tank section for sewage and those which can be transportable but are not necessarily portable and comprise a single section generally constituted by a seat supported on a holding tank.

Among these known toilets only the toilets of the second category comprise electric flushing means and a toilet of the first category comprising electric means for flushing the bowl according to Claim 1 is not disclosed in any one of the above mentioned publications.

Therefore, the subject-matter of Claim 1 is novel with respect to this state of the art and it is to be noted that the Appellant did not dispute novelty.

7. According to the Board's opinion, document US-A-3 570 018 discloses the nearest state of the art and should be used as a starting basis for examining whether the subject-



matter of Claim 1 implies an inventive step because this document concerns a portable toilet comprising two sections i.e. a seat section having its own fresh water flushing tank and a separate holding tank section for sewage like the toilet according to the invention. Documents US-A-3 801 991 and US-A-3 949 430 disclose also the same type of toilet.

8. Portable toilets of this kind utilize manually actuatable flushing means such as pumps of the bellows type for flushing the toilet bowl and according to the description column 1, lines 20-25 of the patent specification some persons may experience difficulties in operating these manually actuatable means. The problem underlying the invention is, therefore, to improve the existing portable toilets so that everybody can flush the toilet without difficulty (see column 2, lines 15-17 of the description).
9. This problem is solved according to the invention by the combination, in a portable toilet of the kind disclosed in the above-mentioned US patent, of the following features:
  - (a) the flushing means comprise an electrically operated submersible pump having a water inlet located adjacent to the bottom of the tank and an electrical switch for energizing said pump when the switch is closed;
  - (b) the switch for energising the pump is rigidly mounted on said pump at an elevated position above said top wall portion, and located externally of said tank for manual actuation and is normally biased open and is responsive to pressure exerted thereon to move to a closed position, said switch being so arranged that flushing of the bowl can occur only while the switch is maintained closed by exerted pressure;

(c) a housing enclosing the upper portions of the pump is sealed to the edge of the aperture in the top wall portion, and a seal is provided between the lower end of the housing and the pump to prevent escape of water from the tank into the housing, said housing enclosing the switch (39) as well as the upper portion of the pump (40) and being flexible for actuation of the switch (39) therein.

10. On the question of whether the prior art provides any indications as to how a portable toilet of the kind disclosed in US-A-3 570 018 may be modified in order to incorporate in combination the above-mentioned features, the following should be noted:

(a) All the documents concerning portable toilets teach the use of manual flushing means of the bellows type and none gives any hint for abandoning this manual type;

(b) Since the toilet can be transported in different positions so that water can move everywhere inside the tank, the use of electric means in such a wet environment appears inappropriate at first sight.

In view of these two observations, the Board has some doubt that it would be obvious to the man skilled in the art to contemplate replacing manual means by electric ones. Supposing that he would, he will learn from DE-A-1 609 258 the use of an electric pump adapted for pumping sewage; thus he will have to adapt the pump to use with fresh water and also to modify the switch so that the flushing action does not continue automatically when pressure is released. Since one aim of the invention is to facilitate flushing of the toilet, there seems to be no reason why the skilled person should modify this known automatic switch so that a continuous pressure thereon becomes necessary.

Supposing again that he would, the pump would still have to be mounted with the switch located above the tank and both the switch and the upper part of the pump would have to be enclosed in a flexible housing for actuation of the switch therein.

The location of the switch above the tank so that it can be easily depressed would obviously facilitate the flushing and to seal the switch and the upper part of the pump to prevent escape of water and contact thereon when the toilet is being transported appears necessary. But, as far as the flexibility of the enclosure for actuation of the switch therein is concerned, there is no suggestion in any one of the documents disclosing the background art and, because of the completely different functions of said flexible enclosure and the bellows acting as flushing plungers disclosed in US-A-3 570 018, no comparison can objectively be made between these two means.

On the contrary, all the documents disclosing toilets embodying an electric pump teach the use of rigid casings for enclosing the electric arrangement; moreover, since the toilet is intended to be transported, a rigid enclosure protecting the switch against impacts would logically appear more appropriate. Therefore, the provision of a flexible enclosure against the teaching of the prior art documents and against a logical approach cannot be considered by the Board as being obvious.

11. To sum up, starting from the portable toilet disclosed in US-A-3 570 018 and in order to arrive at a toilet falling within the terms of Claim 1 of EP-A-0 009 405 the man skilled in the art will have to take the following steps:

- (a) To decide to replace manual flushing means by electrical ones against the teaching of all documents referring to portable toilets and also against a natural reluctance to use electrical means in a wet environment;
- (b) to adopt the pump disclosed in DE-A-1 609 258 which is adapted to pump sewage more than fresh water and to modify the pump itself and also its switch;
- (c) to mount the pump on the tank in a position so that the switch is reached easily;
- (d) to enclose the switch and the upper part of the pump in a protective housing sealed on the tank;
- (e) to decide in favour of a flexible housing instead of a rigid one against the teaching of all the documents disclosing the prior art and against a logical approach.

At least step (a) and steps (b) and (e) which go against teachings of documents specialised in the same technical field or against general knowledge or received ideas cannot be considered as obvious by the Board.

Considering now the number of adaptations necessary to arrive at a toilet according to Claim 1, it appears clearly that the improvement does not follow plainly or logically from the prior art but implies an inventive step within the meaning of Article 56 EPC.

Therefore, the subject-matter of present Claim 1 fulfils the requirements of Article 52 EPC and is patentable.

12. But, since the invention still relates to a portable toilet, the original title and the original opening sentence of the description should be retained for more exact information of the Public.

#### Order

For these reasons, it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the first instance with the order to maintain the European patent on the basis of the documents specified in the interlocutory decision but with the title and the opening sentence as granted.

The Registrar

The Chairman

S. Fabiani

C. Maus